California Energy Commission Integrated Energy Policy Report Workshop

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State's Perspective on Land Use, Transportation, Energy/Greenhouse Gas Emissions Connection

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In California, Transportation accounts for:

- ◆ Over 60% of petroleum consumption
- Over 40% of all anthropogenic Greenhouse Gases

This is roughly equal to the product of:

- the number of vehicles
- the average number of miles traveled by each vehicle (vehicle miles traveled, or VMT)
- the average fuel economy and net emissions of GHG per vehicle mile traveled

In California:

- Number of vehicles is increasing faster than the population
- Annual VMT is increasing as people commute longer distances
- Average on-road fuel economy is declining due to replacement of traditional family cars with light-duty trucks and sport utility vehicles

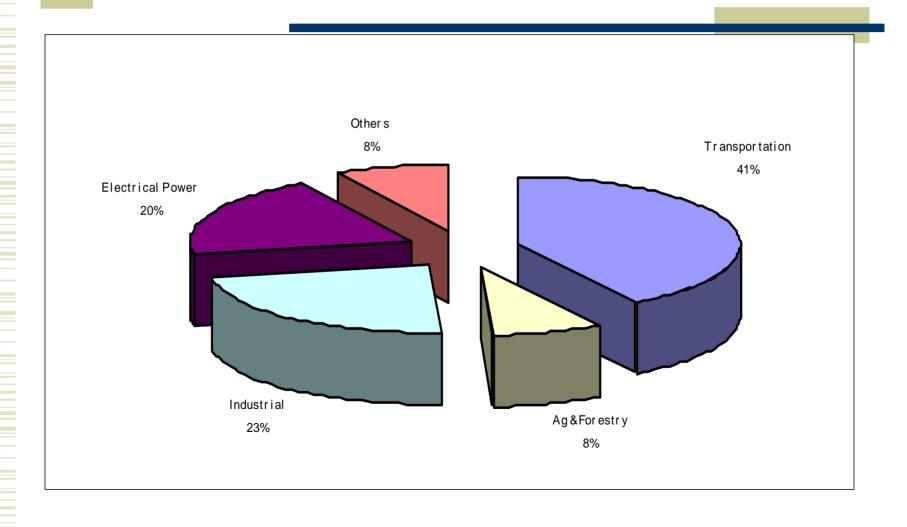
In 2004 California Drivers:

- Traveled 330 Billion Miles
- Consumed 18.1 Billion gallons of fuel
- At an estimated cost of \$35 Billion Dollars

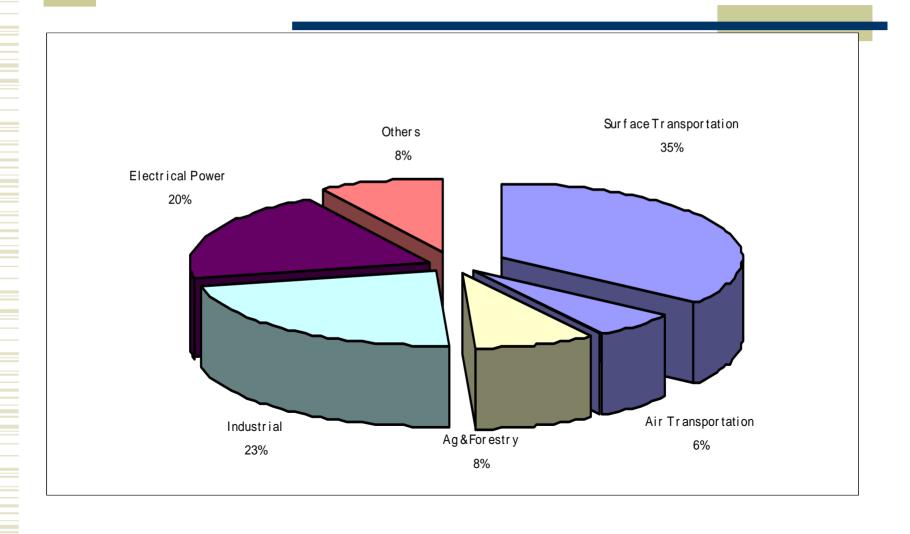
This is a 15% increase since 1990

If current growth trends continue, gasoline use and related CO2 emissions in the state will increase approximately 40 percent over the next 20 years.

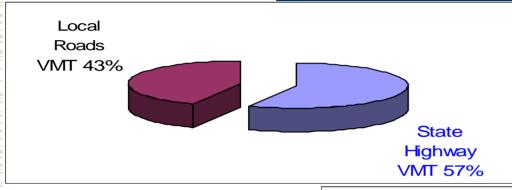
California's total CO2 emissions from fossil fuel combustion in 2002 (360 Million metric tons)

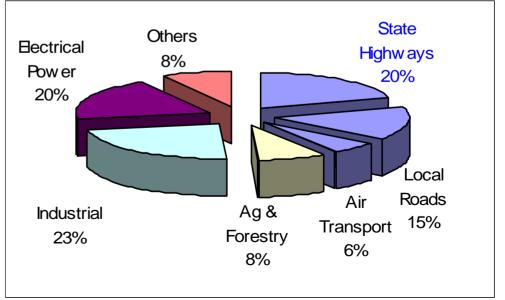


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Land Use & Transportation Trip Generation





CALIFORNIA

MET ROPOLIT AN PL ANNING ORGANIZATIONS (MPO's)

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Regional Transportation Planning Agencies (RTPA's)



Recommended Strategies

1) Improving Transportation System Efficiency

Reduce, manage, and eliminate trips, that are primary means of congestion, GHGs, and air pollution through smart land use, ITS, demand management, value pricing, and market based strategies.

2) Improving Transportation Energy System Efficiency

Provide a framework for expanded and new initiatives, including incentives, tools and information, to advance cleaner, more efficient transportation and reduction of greenhouse gas emissions.

1) Improving Transportation System Efficiency

Smart Land Use:

- Jobs/housing proximity
- Transit oriented development
- High density residential/commercial development along transit corridors
- Bicycle & pedestrian
- Infill
- Mixed Use

ITS:

• Improve operational efficiency of the existing and new transportation systems and movement of people, goods and services. Relieve congestion by enhancing operations and improving travel times in high congestion travel corridors.

Long Term Strategies

Short Term Strategies

2) Improving Transportation Energy System Efficiency

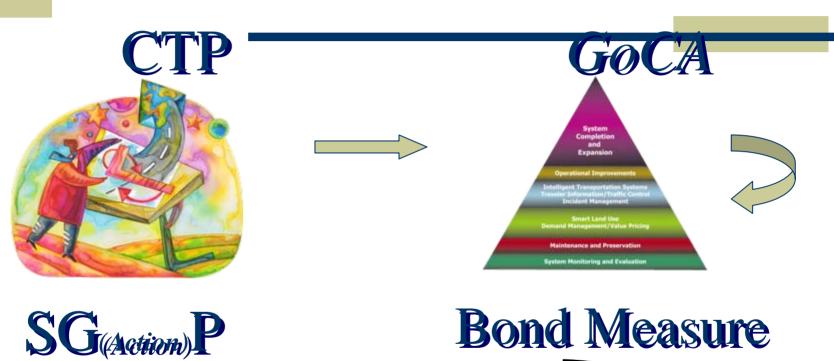
Develop energy element in state transportation and regional planning documents

Fleet greening and diversifying transportation energy infrastructure, specially in the public sector

Educational & Information Programs on transportation energy and related environmental, financial, economic and strategic security issues

Energy efficiency in the design, construction, operations and maintenance of transportation facilities and buildings

CTP-GoCA-SGP-Bond Measure

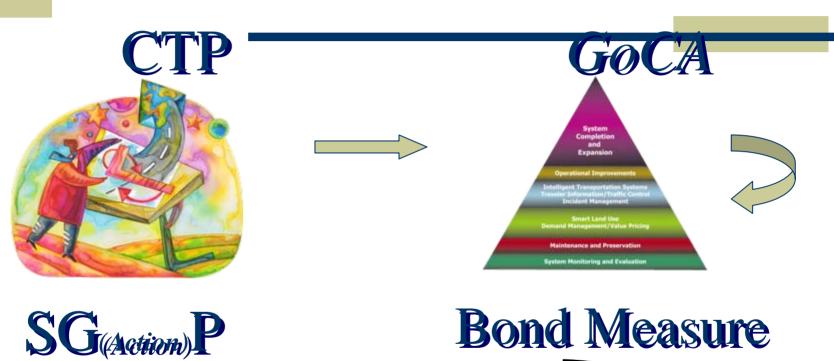








CTP-GoCA-SGP-Bond Measure











Regional Blueprint Planning

A State initiative to promote:

- Linking land use, transportation, housing, environment, economic development, equity
- Consensus on preferred growth scenario -"Blueprint" - for each region identifies transportation impacts of land use
- A more efficient and effective transportation system
- Sufficient housing supply to accommodate population growth in each region





Desired Outcomes

Regional blueprint plans for land use patterns and transportation systems that:

- Improve mobility
 - reduce auto dependency, congestion
 - increase transit use, walking and bicycling
 - reduce energy consumption & GHG emissions
- Land use
 - encourage infill development
 - accommodate sufficient housing supply
 - minimize impacts on farmland and habitat
- Establish a better process for public engagement in planning





Planning Grants

Grants	Annual Funding

Community-Based Transportation Planning	\$3.0 Million
Environmental Justice	\$3.0 Million
Partnership Planning	\$1.0 Million
Transit	\$2.2 Million
Regional Blueprint	\$5.0 Million

Total Grants (all categories) to-date \$54.0 Million

Inter Governmental Reviews

- Early involvement in local jurisdictions' land use planning and decision making processes consistent with the requirements of California Environmental Quality Act (CEQA) and state planning law.
- Reduce vehicle trips associated with proposed new local development and recommend appropriate mitigation measures for dealing with the transportation impacts of such development.

Technical Support

Regional Forecasts & Projections

Transportation Energy Guide/Training

ITS Guide/Tanning

Estimated Savings*

* Subject To Change

2010

Improving Transportation System Efficiency

&

Improving Transportation
Energy System Efficiency

5.36 mmt GHG444 Mil Gallons\$1.1 Billion

2020

Improving Transportation System Efficiency

<u>&</u>

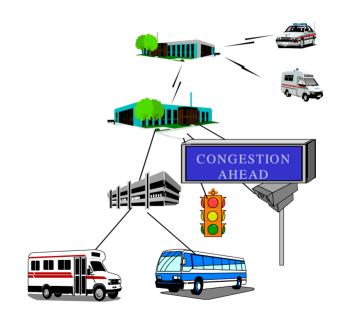
Improving Transportation Energy System Efficiency

17.58 mmt GHG
1,658 Mil Gallons
\$4.3 Billion

What is the CA ITS Architecture and System Plan?

A consensus-based ITS architecture for state-level services and a system plan to guide deployment that is customer-focused

It addresses stakeholder selected ITS services and satisfies the requirement of the federal government.



ITS Inclusions in GoCalifornia:

- ✓ Traveler Information
- ✓ Traffic Control
- ✓ Incident Management
 (Includes Freeway Service Patrol)
- ✓ System Monitoring and Evaluation (At Base of Triangle)

Anticipated Benefits

- Traveler Information Benefit/Cost Ratio of 15:1
- Traffic Control Benefit/Cost Ratio of 10:1
- Incident Management Benefit/Cost Ratio of 11:1 to 20:1

Action Plan

Strategies

- Fully Fund and Implement ITS in SHOPP Plan
- Improve Central and Field Element Operations and Maintenance
- Expand Freeway Service Patrol

<u>System Performance</u> <u>Outcomes</u>

- Reduced Delay by 20%
- Preserved Health of System Operation
- Reduced Delay

Total Package Will Result in: Reduced Future Delay by 200,000 Hours/Day

